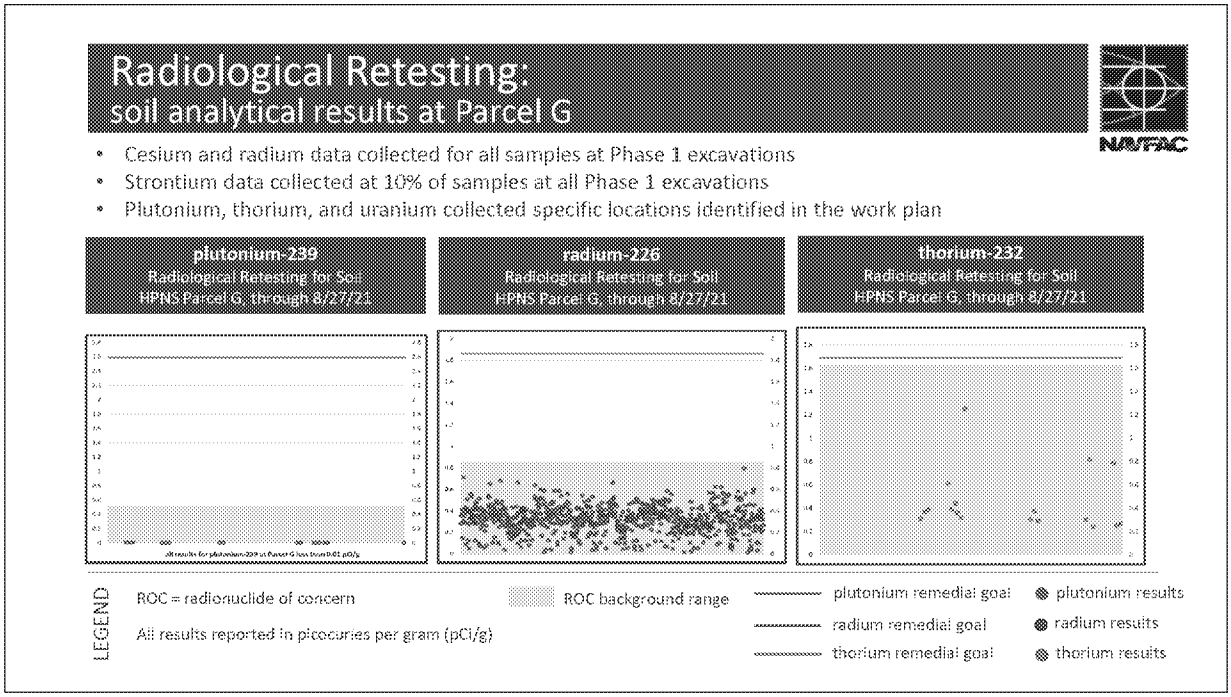

All results Phase 1 soil results received through August 2021 fall below the remedial goal established for each radionuclide of concern.

In addition, initial results for cesium, plutonium, radium, thorium and uranium all fall within the background range.

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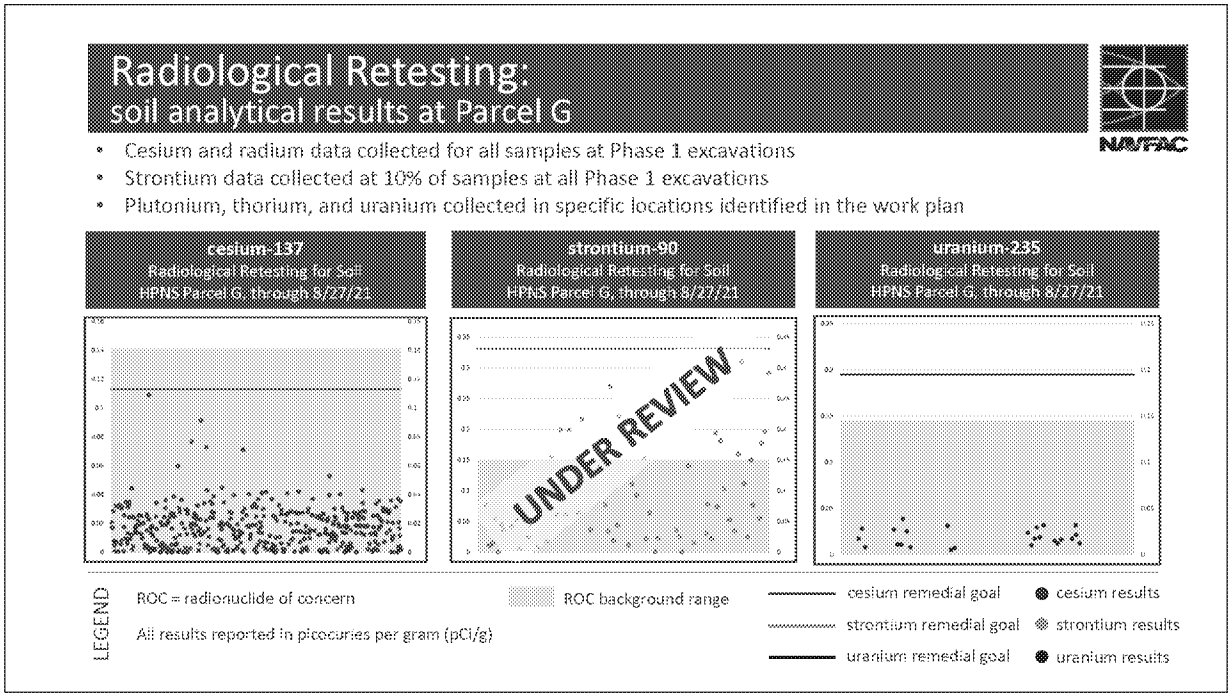

The Navy continues to collect new data for six radionuclides of concern at Parcel G, including:
Cesium, radium, and strontium at all excavations
Plutonium, thorium, and uranium at excavations identified as potential locations for those radionuclides of concern

Phase 1 samples are collected from 25 locations at 21 trench units.
After collection, samples are sent to an independent laboratory for analysis.
When analysis is complete, the data is evaluated, and the results are compared to the background results and the remedial goals that were established.

Initial results collected, analyzed, and received for Phase 1 through August 27, 2021 are shown on this slide and the next.
The remedial goal for each radionuclide of concern is shown as a line in the graphs above.
The naturally-occurring background range for each radionuclide is represented by the shaded gray area in each graph.
Data points for soil analytical results for each radionuclide are shown as a circle on each graph.

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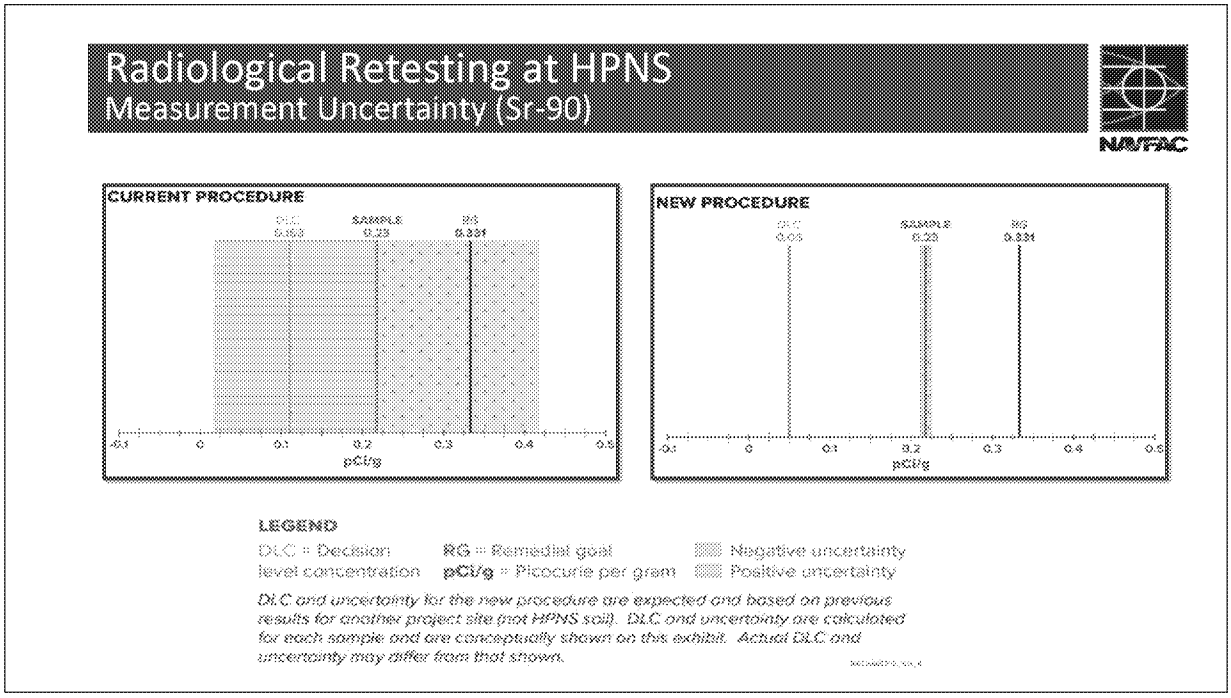

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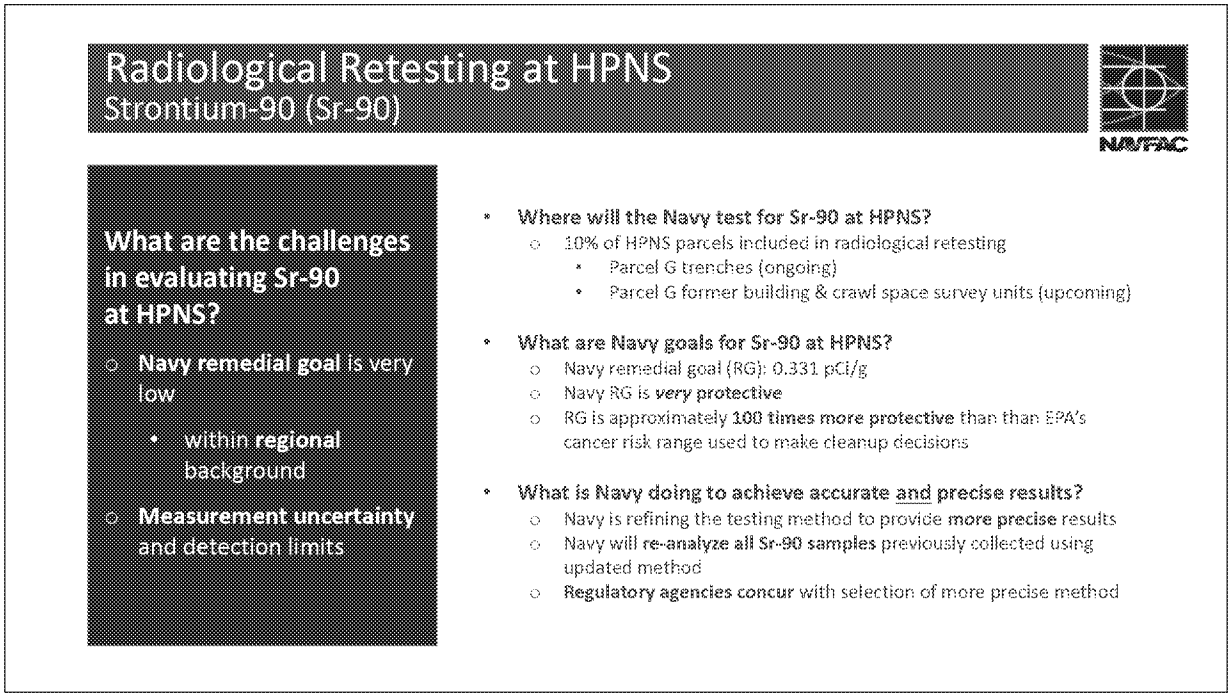

RISK: RESRAD and PRG evaluation using Navy RGs = Translates into 1/100th (100 times lower) than NCP risk rate [ref: HPS FYR RAD Add for Soil]

From Sr-90 Summary 28 Sept 2021

Chemists and other experts have evaluated a summary of all results to date and determined that the laboratory method is not meeting the Data Quality Objectives of the WP. The current method results in too much uncertainty to meet our low detection limits and therefore we cannot determine if the sample contains strontium are above or below our remedial goal.

PATH FORWARD – alternate approach is more detailed, more rigorous
An alternate approach has been developed that runs the same laboratory method in a way that the data is useable and reliable for this project. Going forward, the laboratory will use a 2.5-gram aliquot for analysis, versus the previous 1 gram for analysis. The lab will use the 14 day ingrowth versus the 7-day ingrowth. If a sample has a Sr-90 result above the RG, the same aliquot will be immediately re-counted to verify the result is re-producible. The new method is more appropriate for low detection limits and should provide a level of uncertainty below the remedial goal even if there is a false positive.
All samples analyzed for strontium will be re-analyzed using the updated method.
The new data set will supersede prior data collected using the old method.

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Other notes:

Sr-90 is an ROC at all sites with SS/SD lines

Exceedances: 23 total samples from 9 TUs
69 (5) 70 (1) 77 (5) 79 (5) 95 (2)
97 (2) 100 (1) 101 (1) 124 (1)

Health information from ATSDR and EPA fact sheets on strontium
https://www.atsdr.cdc.gov/ToxProfiles/tp159-c1-b.pdf
https://semspub.epa.gov/work/HQ/175430.pdf
https://www.epa.gov/radiation/radionuclide-basics-strontium-90

Risk evaluation based on what is baseline hazard at site, what level is achievable, what is planned future use, etc.

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